Amendments to the Specification:

Please amend the paragraph beginning on page 1, line 4 as follows:

This application **is a divisional application of U.S. Application No. 10/358,835, filed February 5, 2003, now allowed, which** claims the benefit of priority of U.S. Provisional Application No. 60/354,339 filed February 5, 2002, **both of which are** hereby incorporated by reference.

Please amend the paragraph beginning on page 21, line 6 as follows:

Another embodiment (5) of the invention is a compound according to any one of embodiments (1) to (2) wherein:

X is CH_2;

R^1 is H;

R^2 is methyl;

R^3 and R^4 are taken together form a 6-membered cyclic ~~**morphine**~~ **morpholine** ring.

Please amend the paragraph beginning on page 21, line 14 as follows:

Another embodiment (6) of the invention is a compound according to any one of embodiments (1) to (2) wherein:

X is CH_2;

R^1 is H;

R^2 is ethyl;

R^3 and R^4 are taken together form a 6-membered cyclic ~~**morphine**~~ **morpholine** ring.

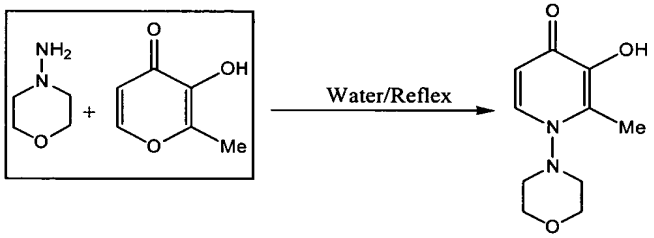
Please amend the paragraph beginning on page 35, line 12 as follows:

Materials. ~~**4-Aminomorphine**~~ **4-Aminomorpholine**, 1-aminopiperidine, ammonium chloride, benzoylhydrazine, ethylmaltol, isonicotinic acid hydrazide, maltol, nicotinic acid

hydrazide, phenylsulfonylhydrazide, sodium ascorbate, and thiophenecarboxylhydrazide were purchased from Aldrich, and were used as received. $^{111}InCl_3$ (in 0.05 N HCl) were purchased from NEN®, N. Billerica, MA.

Please amend the paragraph beginning on page 36, line 19 as follows:

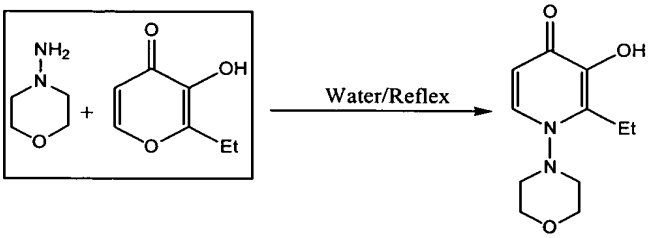
Example II - Synthesis of ~~N-(1-Morphinyl)-2-Methyl-3-Hydroxy-4-Pyridinone~~ **N-(1-Morpholinyl)-2-Methyl-3-Hydroxy-4-Pyridinone** (MMHP)



Maltol (3.6 g, 30 mmol) and ~~1-aminomorphine~~ **1-aminomorpholine** (4.5 g, 45 mmol) were suspended in 100 mL of water. The mixture was heated to reflux for 2 days to give a dark brown solution. The solvent was removed under vacuum to give a black residue. Upon standing at room temperature overnight, a solid was formed. The solid was collected by filtration and was then recrystallized in a mixture of water/methanol (2:1=v:v) to give brownish solid. The product was collected by filtration, washed with cold methanol, and dried under vacuum overnight. The yield was 0.60 g (~9.5%). LC-MS: *M/z* = 211.2 for $[C_{10}H_{14}N_2O_3]^+$. ^1H NMR (600 MHz, in CD_3OD, chemical shift in ppm relative to TMS): 2.50 (s, 3H, CH_3); 3.00 (d, 2H, J_{HH} = 10.9 mHz, ~~CH_2/morphine~~ **CH_2/morpholine**); 3.29 (m, 2H, ~~CH_2/morphine~~ **CH_2/morpholine**); 3.79 (m, 2H, ~~CH_2/morphine~~ **CH_2/morpholine**); 4.00 (d, 2H, ~~CH_2/morphine~~ **CH_2/morpholine**); 6.53 (d, 1H, J_{HH} = 7.5 mHz, CH_2/pyridinone); and 8.09 (d, 1H, J_{HH} = 7.5 mHz, CH/pyridinone).

Please amend the paragraph beginning on page 37, line 14 as follows:

Example III - Synthesis of ~~N-(1-Morphinyl)-2-Ethyl-3-Hydroxy-4-Pyridinone~~ **N-(1-Morphinyl)-2-Ethyl-3-Hydroxy-4-Pyridinone** (MEHP)



To a round-bottom flask were added ethylmaltol (3.2 g, 24 mmol), ~~1-aminomorphine~~ **1-aminomorpholine** (4.0 g, 40 mmol) and 100 mL of water. The mixture was heated to reflux for 2 days to give a dark brown solution. Upon removal of the solvent, the dark residue was re-dissolved in a mixture of hot water/methanol (50%:50%=v:v) in the presence of ~~charcol~~ **charcoal.** The mixture was filtered while hot. Solvents were removed under vacuum to give a black residue. After standing at room temperature for 2 days, a solid was formed. The solid was collected by filtration and was then recrystallized in a mixture of water/methanol (2:1=v:v) to give brownish microcrystals. The product was collected by filtration, washed with cold methanol, and dried under vacuum overnight. The yield was 0.48 g (~8.9%). LC-MS: *M/z* = 225.3 for $[C_{11}H_{16}N_2O_3]^+$. ^1H NMR (600 MHz, in CD_3OD, chemical shift in ppm ~~relatinve~~ **relative** to TMS): 1.26 (t, 3H, CH_3); 2.95 (m, 4H, J_{HH} = CH_2/ethyl and morphine); 3.33 (m, 2H, CH_2/morphine); 3.80 (m, 2H, CH_2/morphine); 4.00 (m, 2H, CH_2/morphine); 6.49 (d, 1H, J_{HH} = 7.5 mHz, CH/pyridinone); and 8.05 (d, 1H, J_{HH} = 7.5 mHz, CH/pyridinone).